

FIG. 1

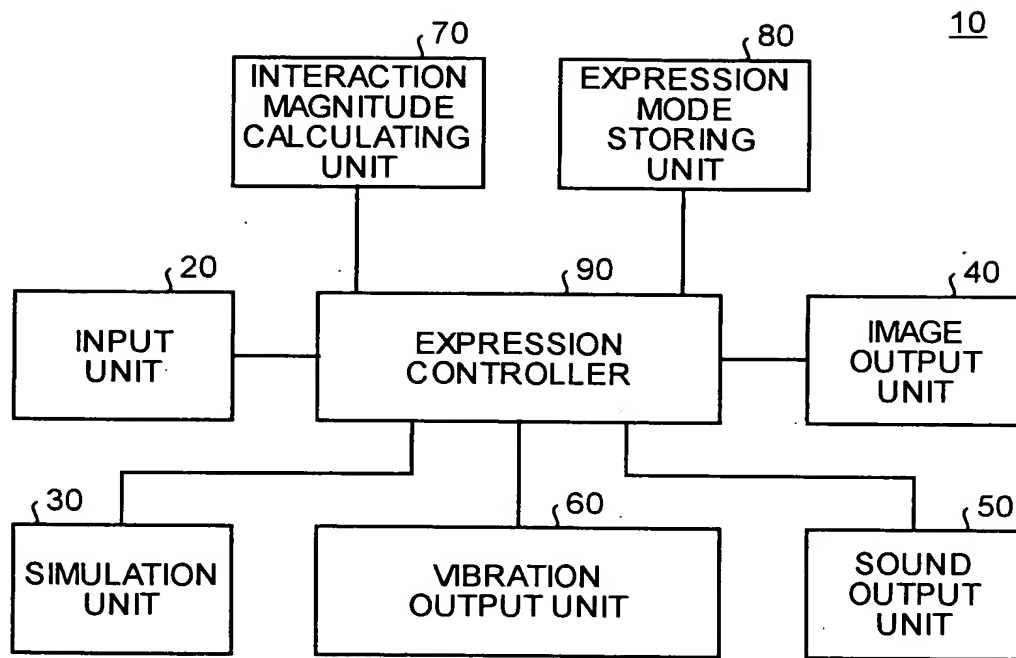


FIG.2A

PRE-COLLISION AND POST-REBOUND INTERACTION MAGNITUDE AND EXPRESSION MODE

INTERACTION MAGNITUDE	EXPRESSION MODES	
	COLOR OF COLLIDER ENTITY	COLOR OF COLLIDER ENTITY
1.5mm < SHORTEST DISTANCE	PURPLE	YELLOW
1.0mm < SHORTEST DISTANCE ≤ 1.5mm	BLUE	YELLOW
0.5mm < SHORTEST DISTANCE ≤ 1.0mm	GREEN	YELLOW
0 < SHORTEST DISTANCE ≤ 0.5mm	YELLOW-GREEN	YELLOW
SHORTEST DISTANCE = 0.0mm	YELLOW	YELLOW

FIG.2B

INTERACTION MAGNITUDE AND EXPRESSION MODE DURING COLLISION

INTERACTION MAGNITUDE	EXPRESSION MODES			
	IMPACT WAVEFORM	ANIMATION	COLOR	IMPACT SOUND
SMALL DENTING AMOUNT	SINGLE SINUSOIDAL WAVE	SMALL AMPLITUDE SINUSOIDAL WAVE	YELLOW	LOW SOUND
MEDIUM DENTING AMOUNT	HALF-SINE WAVE	MEDIUM AMPLITUDE SINUSOIDAL WAVE	ORANGE	MEDIUM SOUND
LARGE DENTING AMOUNT	OBLONG WAVE	LARGE AMPLITUDE SINUSOIDAL WAVE	RED	HIGH SOUND
				FEEBLE VIBRATIONS
				MEDIUM VIBRATIONS
				HIGH VIBRATIONS

FIG.3

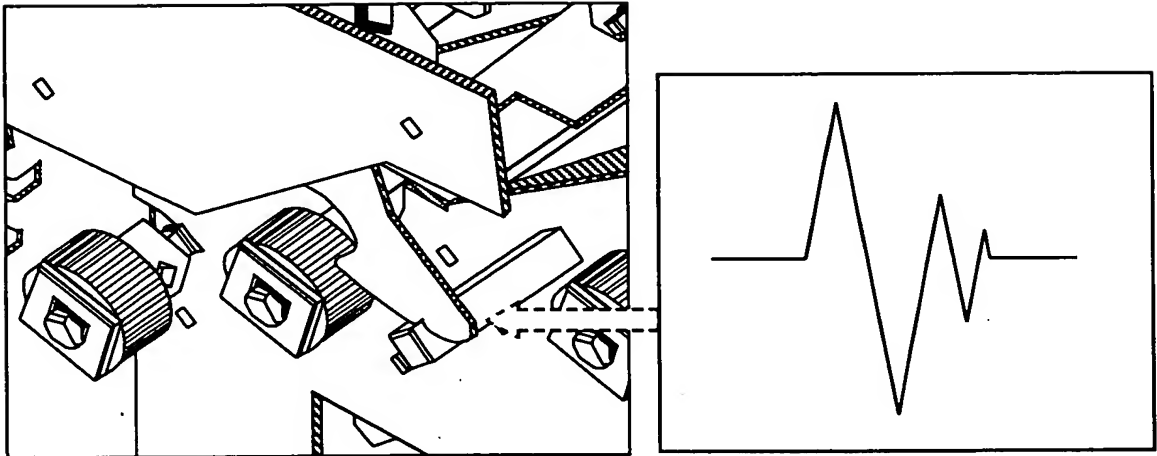


FIG.4

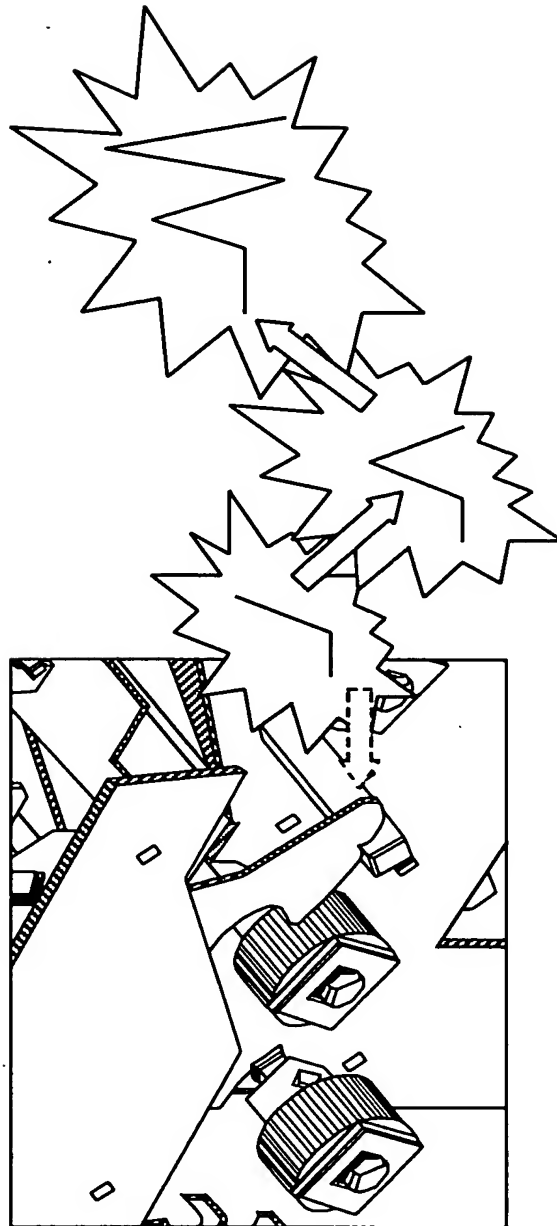
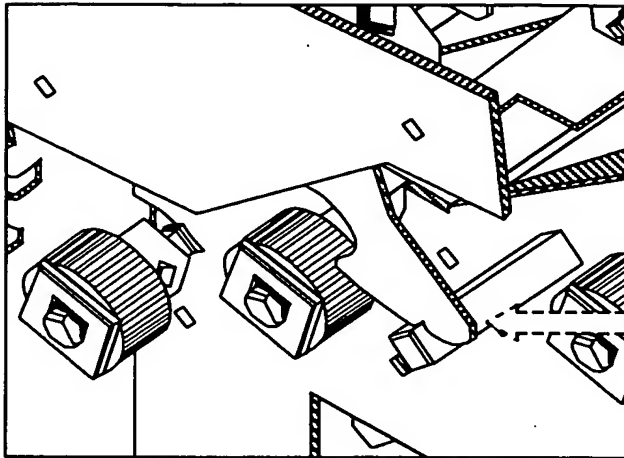
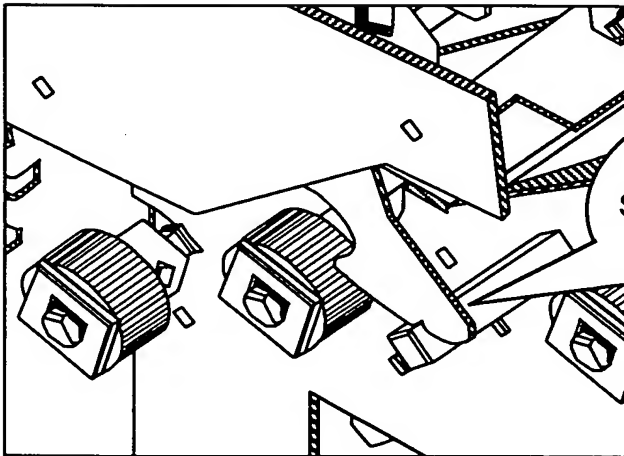


FIG.5



COLOR CHANGES FROM
YELLOW TO ORANGE TO RED

FIG.6



SOUND OF COLLISION
IS PRODUCED

FIG.7

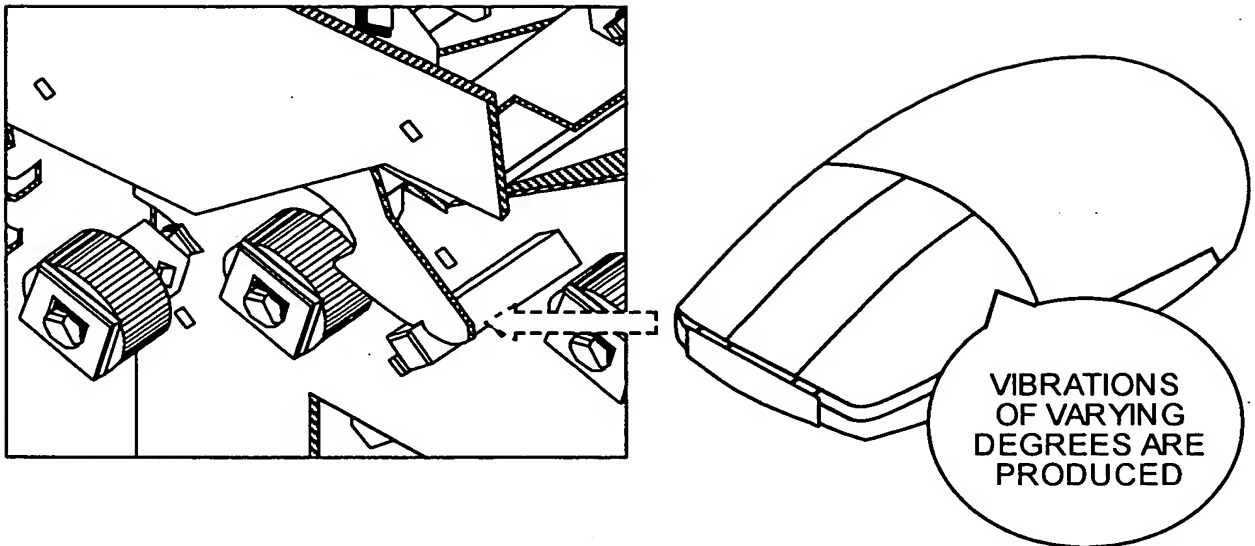


FIG.8

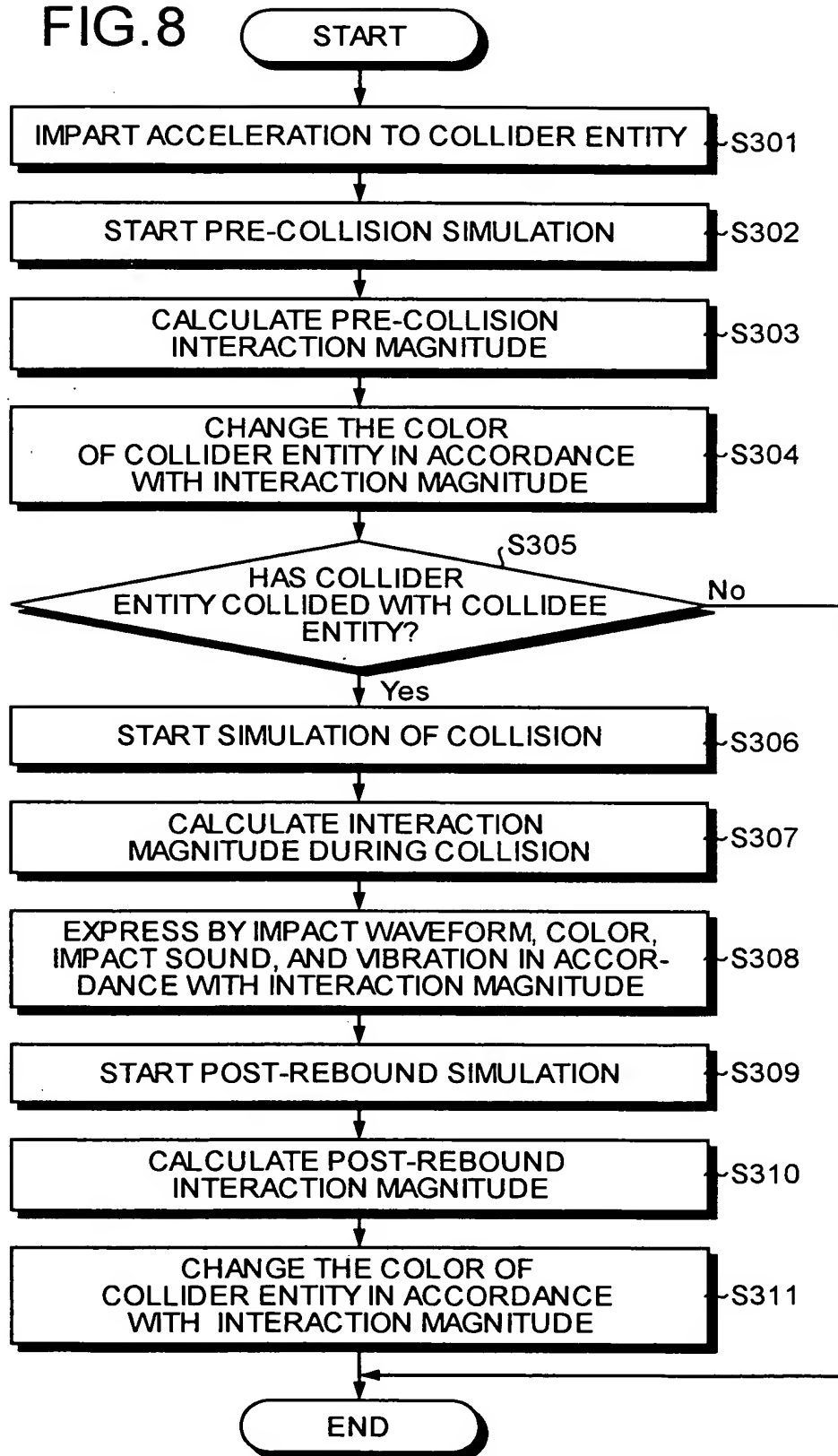


FIG. 9

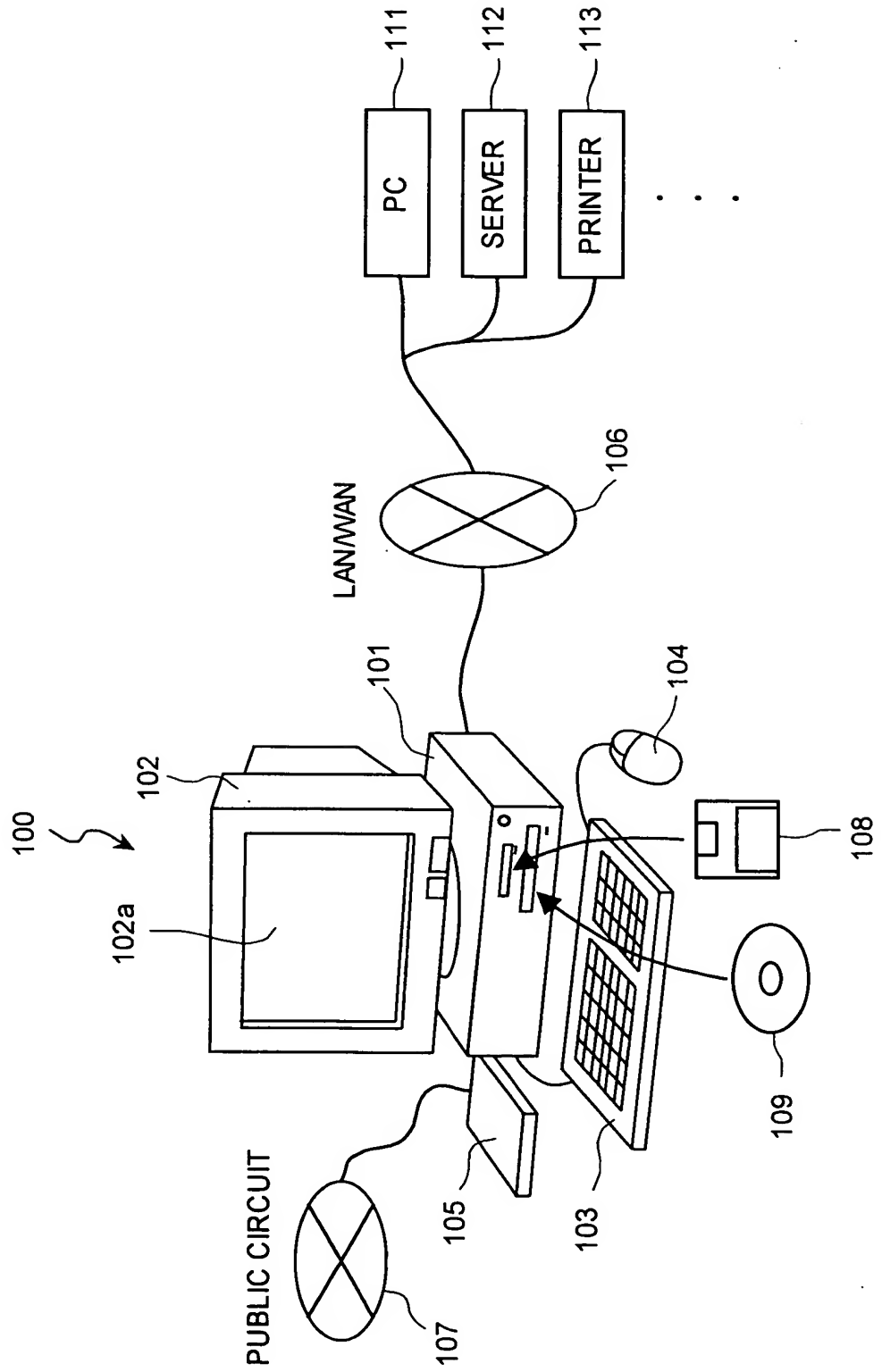


FIG. 10

